layer (9) are smaller than 0.001 nm.

A' cont'd

23. The saturable absorber according to Claim 15, characterized in that the lattice mismatches of the material of the substrate (1) and of the material of the intermediate layer (9) are smaller than 0.001 nm.

Please amend the claims as follows:

Sub B'

A^2

1. (Amended) A saturable reflector for a laser wavelength λ_L with which a reflector (2) is applied onto a surface of a substrate (1), and a layer sequence (3) with a saturable absorbing effect is applied onto the reflector, characterized in that the layer sequence (3) contains a strained-layer single quantum well (6) adjacent to a cap layer (7) of uniform composition, whereby the material composition of the single quantum well (6), its layer thickness and its strain in the layer structure within a wavelength range all serve to define an absorbing effect, this wavelength range includes the laser wavelength λ_L, and moreover, the degree of the saturable effect is defined by the selection of the distance between the strained single quantum well (6) and the boundary surface of the cap layer adjacent to a surrounding gaseous medium (8, 10).

Sub C1

A^3

5. (Amended) The saturable reflector according to Claim 3, characterized in that the lattice mismatches of the materials (4, 5) of the reflector and of the material of the intermediate layer (9) are smaller than 0.005 nm.

6. (Amended) The saturable reflector according to any of Claims 1 through 5, or 22, characterized in that the reflector is a Bragg reflector that consists of a first material (4) with a refractive index n_H and of a second material *(5)* with the lower refractive indices n_L, and furthermore, the intermediate layer (9) and/or the cap layer (7) consist of one of these materials.

Sub C1

A3 cont'd

7. (Amended) The saturable reflector according to any of Claims 1 through 5 or 22, characterized in that the reflector (2) consists of individual layers, each of which has a thickness that is $\frac{\lambda_L}{4 * n_{GaAs}}$ for the first material (4) with the refractive index n_H with undoped gallium arsenide (GaAs) and that is $\frac{\lambda_L}{4 * n_{AlAs}}$ for the second material *(5)* with the lower refractive indices nL with undoped aluminum arsenide (AlAs), moreover, the cap layer (7) and the intermediate layer (9) are made of one of these materials (4 or *5),* within which the single quantum well (6) made of indium-gallium arsenide ($In_XGa_{1-X}As$) is strained, whereby the indium mole fraction (x) and the gallium mole fraction (1-x) in the indium-gallium arsenide compound and its layer thickness all serve to define the absorbing effect as a function within a wavelength range, this wavelength range comprises the laser wavelength λ_L, at which a maximum of the absorption curve lies.

8. (Amended) The saturable reflector according to any of Claims 1 through 5 or 22, characterized in that the reflector (2) consists of individual layers, each with a thickness that is $\frac{\lambda_L}{4 * n_{InGaAs}}$ for the first material (4) with the refractive index n_H with indium-galium arsenide ($In_{0.53}Ga_{0.47}As$) with an indium mole fraction of 53% and that is

$\frac{\lambda_L}{4*n_{AlAs}}$ for the second material (5) with the lower refractive indices n_L with indium phosphide (InP), moreover, the cap layer (7) and/or the intermediate layer (9) are made of one of these materials (4 or 5), below which and/or on which the single quantum well (6) made of indium-gallium arsenide ($In_xGa_{1-x}As$) is strained with an indium mole fraction x unequal to 0.53%, whereby the indium mole fraction x and its layer thickness define the absorbing effect as a function within a wavelength range.

A3 cont'd

9. (Amended) The saturable reflector according to any of Claims 1 through 5 or 22, characterized in that the reflector is a highly reflecting metal mirror (11) on which the layer sequence (3) is applied.

11. (Amended) The saturable reflector according to Claim 1, characterized in that the strained layer single quantum well (6) is grown at temperatures below 500° C.

A4

12. (Amended) The saturable reflector according to any of Claims 3 through 5 or 22, characterized in that the cap layer (7) with the strained-layer single quantum well (6) and with the intermediate layer has an optical thickness of $\lambda_L/2$ or a whole multiple thereof.

Sub B2

13. (Amended) The saturable reflector according to one or more of Claims 1 through 5 or 22, characterized in that the saturable absorbing effect is adjustable through the selection of the position of the strained-layer single quantum well (6) within the

structure of the adjacent layers, whereby these layers each have a greater layer thickness than the single quantum well.

14. (Amended) A saturable absorber for a laser wavelength λ_L, that consists of a layer sequence (3) of several semiconductor layers with a saturable absorbing effect on a substrate (1) that is transparent for the laser wavelength, characterized in that the layer sequence (3) contains a strained-layer single quantum well (6) adjacent to a cap layer (7) of uniform composition, whereby the material composition of the single quantum well (6), its layer thickness and its strain in the layer structure all serve to define an absorbing effect within a wavelength range, moreover, a saturable effect is defined by the selection of the position within the standing wave of a laser resonant cavity.

17. (Amended) The saturable absorber according to Claim 15, characterized in that the lattice mismatches of the material of the substrate (1) and of the material of the intermediate layer (9) are smaller than 0.005 nm.

19. (Amended) The saturable absorber according to Claim 14, characterized in that the strained-layer single quantum well (6) is grown at temperatures below 500° C.

20. (Amended) The saturable absorber according to Claim 15, characterized in that the cap layer (7) is coated with an anti-reflective coating (8), and when combined with the strained-layer single quantum well (6) and with the intermediate layer has an optical thickness of $\lambda_L/2$ or a whole multiple thereof.